Subspecialty Differences in Responding to Patient Death—Comparing Cardiologists With Oncologists

DAVID W. BATES, MD; SUSAN W. TOLLE, MD; *and* DIANE L. ELLIOT, MD, *Portland*

Cardiac deaths are more likely to be unanticipated than cancer deaths by patients, their families, and their physicians. We hypothesized that differing physician attitudes toward dying patients may affect the degree of expectation of death. To evaluate differences in attitudes and behaviors among subspecialists, we surveyed a randomly selected population of California subspecialists; 44 of 136 (32%) of cardiologists and 91 of 167 (55%) of oncologists responded. Oncologists experienced three times as many deaths as cardiologists and reported having discussed code status more often with patients who died. Cardiologists' patients' deaths were more often unexpected and occurred more frequently in intensive care units. In addition, their patients were more likely to be given cardiopulmonary resuscitation. Oncologists reported being more comfortable dealing with dying patients and having less desire to avoid them. When presented with patient scenarios, however, cardiologists' and oncologists' responses were similar when discussing and estimating prognosis and likelihood of successful therapy.

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Unexpected deaths are often traumatic for family members, who are more likely to have poor subsequent adjustment than when a death in the family is anticipated.[1-3] Data from interviews with survivors of patients who died in 1983 at the Oregon Health Sciences University Hospital document marked variation in the frequency with which death was expected.[1] Physicians and families expected 90% of cancer deaths, but only 40% of cardiac deaths.

We hypothesized that there may be differences in attitudes and practices of cardiologists and oncologists toward dying patients that may affect a survivor's expectation of death. Do the two subspecialties estimate or discuss prognosis differently? To investigate this question, we surveyed practicing physicians about their attitudes and practices regarding patient death.

Methods

We surveyed a random sample of 250 cardiologists and 250 oncologists from the California Medical Association's list of all cardiologists (n = 786) and oncologists (n = 730), including both Association members and nonmembers. Nonrespondents were called, and those belonging to surgical subspecialties or with no listing were eliminated. To follow up on responses from the first survey, a second questionnaire was mailed to all physicians in active practice who had responded to the first questionnaire.

The first questionnaire was composed of 19 questions. The first 5 assessed demographics and the nature of each physician's practice. The next 10 addressed the number of patient deaths per physician, whether or not they were expected, where they occurred, and various behaviors by physicians around the time of death. Physicians were also asked whether they had any formal training in death management.

We also presented four patient scenarios: two patients with cancer and two patients with cardiac disease. The prognoses were matched for the four ill patients. A patient with New York Heart Association class IV congestive heart failure and an ejection fraction of 14% was compared with a patient with a locally invasive esophageal cancer. Each disease had a 50% one-year survival.[4,5] The other patient had coronary disease and had had triple coronary artery bypass grafting with an ejection fraction of 30%. This scenario was matched with one with a patient with a Dukes' C colon carcinoma. The literature suggests that both had a 50% survival rate of four years.[5,6] For each scenario, physicians were asked the following:

- Make an estimate of the patient's prognosis, with endpoints of six months and five years;
- State how clearly you would share the prognosis, from not at all—avoiding discussion of prognosis—to giving actuarial prognosis;
- Predict how likely it is that additional therapy would benefit the patient, from no chance of increasing life span to definitely increase life span.

Attitudes were further assessed in the second questionnaire by asking physicians to respond to 13 attitude statements. A visual analogue scale was used with end points of "agree strongly" to "disagree strongly."

Student's *t*-test was used to assess the significance of differences in questionnaire responses between the two groups. Statistical significance was set at the $P < .01$ level.

From the Department of Medicine, Division of General Medicine, Oregon Health Sciences University School of Medicine, Portland.

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Results

Following two mailings, responses were received from 189 of 500 physicians (38%). Of these, 54 belonged to other specialties or were returned without response, leaving 135 respondents: 44 cardiologists and 91 oncologists. After eliminating physicians with no listing and those practicing other specialties from the denominator, our response rate was 32% for cardiologists (44 of 136) and 55% for oncologists (91 of 167). More oncologists than cardiologists responded to the initial questionnaire ($P > .001$, χ^2 statistic). Of physicians who completed the first questionnaire, 79% responded to the second, 74%, cardiologists and 81%, oncologists. Responding cardiologists and oncologists were similar with respect to age, sex, and percentage of time spent in their particular subspecialty.

Demographics of patient deaths were significantly different between the groups (Table 1). Oncologists reported three times as many deaths within the last year as cardiologists. Cardiac deaths were more likely than cancer deaths to be regarded as unexpected. Location of deaths also differed in that only 5% of oncology patients as opposed to 40% of cardiology patients died in intensive care units; many more cancer patients died on hospital wards or at home.

TABLE 1.—*Demographics of Patient Deaths**

Patient Group	Cardiologists, n=38	Oncologists, n=84
Patient deaths (No./year)	14±2	37±3†
Expected (% total deaths)	63±5	90±1†
Unexpected (% total deaths)	37±4	10±1†
Intensive care unit (% total deaths)	40±4	5±1†
Wards (% total deaths)	37±5	56±3†
Home or nursing home (% total deaths)	22±3	41±3†

*Data are mean ± standard error of the mean.
†$P < .001$.

TABLE 2.—*Behaviors With Respect to Patient Deaths**

Frequencies of Physician Action (% total deaths)	Cardiologists, n=38	Oncologists, n=84
Cardiopulmonary resuscitation	56±2	15±2†
Do not resuscitate order	42±4	84±2†
Discussed code status	57±3	82±2†
Sent card	33±6	43±4†
Attended funeral	14±3	9±1†
Office appointment	27±4	22±3†
Called or visited family	44±6	42±4†
Autopsies	26±3	20±2†

*Data are mean ± standard error of the mean.
†$P < .0001$.

Management of dying patients differed between the two subspecialties (Table 2). Oncologists more often discussed code status with patients and wrote more "do not resuscitate" orders than did cardiologists. Fewer cancer patients received cardiopulmonary resuscitation. However, no significant differences were observed in the frequency of contact with families following deaths. Several modes of contact were evaluated. Both groups sent cards to 40% of families, went to 10% of funerals, scheduled office visits with 23% of families, and called or visited 43% of the families following the death. Virtually all physicians were available if the family called with questions. Of both groups, 67% reported having had formal instruction in death management. Frequency of requesting autopsies was also similar between the two groups.

Attitudes were evaluated by asking physicians to rate 13 attitude statements on a 10-point scale; several examples are given in Table 3. Oncologists reported being more comfortable in dealing with dying patients and wondered less often if they could have done more to prolong their patients' lives. Cardiologists more frequently found caring for dying patients unpleasant, and stated more often that they might avoid a patient dying from an irreversible condition. The groups' responses were similar, however, when asked whether they would avoid telling a patient that he or she was dying when the patient did not ask. In two other questions asking physicians how clearly they would define prognosis, there was no significant difference between cardiologists and oncologists (data not shown).

Physicians' views on discussing prognosis with a patient were also evaluated with the case scenarios. The cardiologists and oncologists gave similar prognoses and indicated a comparable degree of willingness to share prognostic information with patients (data not shown). Respondents gave similar estimates of the likelihood of success of additional therapy, other than that already received. There was also no systematic difference in physician estimates of prognosis between disease types (cancer versus cardiac) for either of the paired scenarios.

Discussion

We found that the demographics of and attitudes toward patient death differed significantly between practicing cardiologists and oncologists. Cardiologists experienced fewer patient deaths overall than oncologists but regarded many more of these deaths as unexpected. These differences were reflected in the actions of the physicians at the time of death. Cardiologists discussed code status less often and had fewer patients who were classified as Do not resuscitate. Cardiac deaths were eight times as likely as oncology deaths to occur in intensive care units. The predominant attitudinal difference

TABLE 3.—*Attitudes Regarding Patient Deaths**

Survey Statement‡	Agreement With Statements: Cardiologists, n=28	Agreement With Statements: Oncologists, n=66
I feel as comfortable with dying patients as with other types of patients	4.9±.5	2.3±.3†
When patients of mine die, I usually wonder if I could have done something to prolong their lives	3.9±.6	6.1±.3†
Caring for dying patients is one of the unpleasant aspects of my profession	4.4±.5	6.6±.3†
When possible, I avoid a patient who is dying from an irreversible condition	7.0±.5	8.7±.2†
When patients do not ask specifically, I avoid telling them that they are dying	5.0±.5	4.6±.3

*Data are mean ± standard error of the mean.
†$P < .0001$.
‡Each statement had a visual analogue scale from strongly agree (0) to strongly disagree (10) with neutral (5) in the center.

between the groups was that oncologists reported that they felt more comfortable with dying patients and found caring for them less unpleasant.

Our findings provide insight into how two groups of practicing subspecialists approach the death of a patient. The oncologists in our survey experienced a higher number of patient deaths per year and were more comfortable with dying patients than cardiologists but related prognosis similarly. Other studies have found that physicians with a high likelihood of contact with dying patients are more open with them.[7,8] In addition to practice characteristics, physicians' traits may also influence their attitudes toward dying patients. Investigators have suggested that some physicians choose specialties to decrease the likelihood of contact with dying patients.[9,10] Oncologists, on the other hand, may choose their specialty partly because they find rewards in dealing with dying patients.

An unexpected finding was that the group of physicians responding to this survey had substantially more follow-up contact with survivors and more formal death education than has been reported in the literature. In a previous study at our hospital, only 36% of surviving spouses of inpatient deaths had any subsequent contact with their physicians regarding their spouse's death.[1] In a 1983 survey of primary care physicians in Oregon, less than 10% reported routinely sending a card to survivors.[11] The physicians in this study sent sympathy cards 40% of the time and nearly half subsequently called or visited the family. Also, in a 1981 survey of physicians in the Texas Medical Association, less than 10% reported having taken a course on death or dying, while in our survey, 67% of physicians reported some formal instruction in death management.[12]

Although our initial hypothesis was that cardiologists might consistently overestimate longevity in patients with advanced cardiac disease, our data suggest that this is not the case. When presented with patient vignettes, both cardiologists and oncologists clearly identified patients with advanced cardiac disease as having shortened life spans. Cardiac events are commonly episodic, while cancer tends to progress gradually. Despite having patients with disease profiles that are different, the approach of these practitioner groups toward prognosis is remarkably similar. A substantial difference in attitude between cardiologists and oncologists, however, is that oncologists are more comfortable with dying patients. This might reflect experience gathered from their frequent exposure to dying patients or self-selection in choice of specialty.

The degree of expectation of death influences physicians and family members. Families of patients adjust less well after unexpected deaths, and both survivors and physicians experience significantly more stress when a patient dies unexpectedly.[1,13] Following an unexpected death, physicians are more likely to wonder if they should have done something different to have prevented the patient's death.[13] A clear acknowledgement of prognosis may be beneficial for both families and physicians. Increased knowledge about physicians' attitudes and practices in responding to patient death may suggest further options for intervention in this area.

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